

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Vertellus Specialties UK Limited

Vertellus Specialties UK Limited
Seal Sands Road
Seal Sands
Middlesbrough
TS2 1UB

Variation application number

EPR/BU0311IX/V005

Permit number

EPR/BU0311IX

Vertellus Specialties UK Limited

Permit number EPR/BU0311IX

Introductory note

This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made.

Vertellus Specialties UK Limited operate a chemical manufacturing facility on a largely industrialised area at Seal Sands, approximately 1km from the River Tees, producing fine organic and speciality chemicals for a range of industrial uses including; pharmaceutical, photographic, oil extraction, plastics, polymers and agrochemicals.

These chemical production activities are regulated under the following scheduled activities under the Environmental Permitting (England and Wales) Regulations 2016:

- Section 4.1 A (1) (a) (ii) – production of organic compounds containing oxygen;
- Section 4.1 A (1) (a) (iii) – production of organic compounds containing sulphur;
- Section 4.1 A (1) (a) (iv) – production of organic compounds containing nitrogen;
- Section 4.1 A (1) (a) (v) – production of organic compounds containing phosphorus;
- Section 4.1 A (1) (a) (vi) – production of organic compounds containing halogens.

Some products are manufactured on a continual basis whilst others are produced in campaigns, or in limited batches. Three major chemical products are manufactured throughout the year in relatively large quantities, which are:

- DCDPS (4, 4'-Dichlorodiphenyl sulfone), a plastics monomer;
- Topanol, a plastics antioxidant; and
- SASMAC (sodium allyl sulphonate, maleic anhydride cyanomer), an oil extraction treatment chemical.

Additional to these are a changing portfolio of chemical products manufactured in quantities from tens of kilogrammes per year, to hundreds of tonnes per year. Production is undertaken in seven process buildings, which include; two multi-purpose buildings, a dedicated sulphone building, a kilo facility, a pilot plant and a plant dedicated to pyridine and its derivatives.

This permit variation authorises the operator to manufacture a new chemical, caprylene, and also adds a new scheduled activity to the permit, which is:

- Section 4.1 A (1) (a) (i) – production of organic compounds such as hydrocarbons.

Production of caprylene by reaction of capryl alcohol with a catalyst will be conducted on a campaign basis largely using existing equipment and infrastructure within Plant 4. A new distillation column is the only significant addition to the infrastructure in Plant 4.

Gaseous emissions from the caprylene production process are directed through existing water scrubber vents and liquid emissions are processed in the on-site Effluent Blending Plant (EBP) where they are mixed with effluents from other areas of the site on a batch-wise basis. From the EBP the wastewater is transferred to the on-site biological effluent treatment plant.

The biological effluent treatment plant treats the blended effluent and is operated by Veolia ES (UK) Limited under environmental permit, EPR/WP3030DT, as a multi-operator installation. However, at time of this permit variation, blended effluent was being transferred off-site by tanker to a water authority treatment plant. This

is set to continue until a dedicated route from Vertellus Specialties (UK) Limited to this treatment works has been established.

The permit for the on-site effluent treatment plant, as part of the multi-operator installation, was originally issued to Shanks Chemical Services Limited (BU5364IJ) on 27/11/03. It was transferred to Veolia Water Industrial Outsourcing Limited (EP3139CH) on 02/02/12 and then transferred to Veolia ES (UK) Limited on 22/07/16.

The National Grid Reference for the site is NZ5369324704. It is located less than 1km from the Teesmouth and Cleveland Coast Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI).

The schedules specify the changes made to the permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application BU0311 (EPR/BU0311IX/A001)	Received 24/03/03	
Additional information received	Requested 21/07/03	Addressed by site protection and monitoring plan and conditions in the permit.
Additional information received	22/07/03	Response to request for information dated 11/07/03.
Additional information received	24/10/03	Additional information regarding the multi product protocol.
Additional information received	24/11/03	Response to request for information dated 21/11/03.
Permit determined BU0311 (EPR/BU0311)	26/11/03	Permit issued.
Application for variation	Received 25/05/04	
Variation determined BP3237 (EPR/BU0311IX/V002)	31/07/04	Permit not consolidated.
Environment Agency implemented change	10/03/05	Environment Agency led change as a result of investigation into loss of containment involving DCPDS process.
Variation determined ZP3932SB (EPR/BU0311IX/V003)	30/04/05	Permit not consolidated.
Application EPR/BU0311IX/V004	26/05/10	
Additional information received	26/07/10	Response to request for information dated 26/07/10.
Variation determined EPR/BU0311IX/V004	25/08/10	
Application EPR/BU0311IX/V005 (variation and consolidation)	Duly made 12/11/18	Application to vary and update the permit to modern conditions to add production of caprylene.
Response to Schedule 5 Notice dated 04/01/19	31/01/19	Additional information received on: <ul style="list-style-type: none"> - Discharges to air, water, ground and groundwater; - Containment; - Storage and handling of raw materials, products and wastes.

Status log of the permit		
Description	Date	Comments
Response to Schedule 5 Notice dated 04/01/19	06/02/19	Additional information received on: <ul style="list-style-type: none"> - Vertellus effluent specification for Bran Sands Effluent Treatment Works; - Summary of borehole monitoring data; Work request for addition of capryl alcohol & caprylene to borehole monitoring regime.
Additional information received	27/02/19	Submission of revised site plans/drawings.
Response to Schedule 5 Notice dated 18/02/19	19/02/19	Additional information received on storage and containment of capryl alcohol raw material.
Additional information received	27/02/19	Additional information received on projects for future storage of capryl alcohol.
Variation determined EPR/BU0311IX (Billing Ref: QP3635QN)	11/04/19	Varied permit issued.

Other Part A installation permits relating to this installation		
Operator	Permit number	Date of issue
Veolia ES (UK) Limited	EPR/WP3030DT	22/07/16

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

EPR/BU0311IX

Issued to

Vertellus Specialties UK Limited (“the operator”)

whose registered office is

**St Ann's Wharf
112 Quayside
Newcastle Upon Tyne
NE1 3DX**

company registration number: **02864354**

to operate a regulated facility at

**Vertellus Specialties UK Limited
Seal Sands Road
Seal Sands
Middlesbrough
TS2 1UB**

to the extent set out in the schedules.

The notice shall take effect from 11/04/2019.

Name	Date
James Cobb	11/04/2019

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/BU0311IX

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BU0311IX/V005 authorising,

Vertellus Specialties UK Limited (“the operator”),

whose registered office is

**St Ann's Wharf
112 Quayside
Newcastle Upon Tyne
NE1 3DX**

company registration number: **02864354**

to operate an installation at

**Vertellus Specialties UK Limited
Seal Sands Road
Seal Sands
Middlesbrough
TS2 1UB**

to the extent authorised by and subject to the conditions of this permit.

Name	Date
James Cobb	11/04/2019

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

1.5 Multiple operator installations

- 1.5.1 Where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify without delay the other operator(s) of the installation of the same information.

1.6 Multi product protocol

- 1.6.1 Where the operator proposes to make a change under a multi product protocol that is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) the Environment Agency shall be notified of the proposed change;
 - (b) the notification shall contain a description of the change including: an assessment of its environmental impact; any relevant supporting assessments and drawings; and the proposed implementation date;
 - (c) the change shall not be implemented unless approved in writing by the Environment Agency;
 - (d) as from any approved implementation date, the operator shall operate in accordance with the changed multi product protocol in place of the previously approved version.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit, which is within the area edged in red on the site plan, that represents the extent of the installation covered by this permit and that/those of the other operator of the installation. The area marked on the Site Plan as “Effluent Treatment Plant” is excluded.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

- (a) the nature of the process producing the waste;
- (b) the composition of the waste;
- (c) the handling requirements of the waste;
- (d) the hazardous property associated with the waste, if applicable; and
- (e) the waste code of the waste.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.5 Pre-operational conditions

2.5.1 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 table S3.1.

3.1.2 The limits given in schedule 3 shall not be exceeded.

3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
- (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
- (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

- (a) point source emissions specified in table S3.1;

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 table S3.1 unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production /treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 The operator shall submit an annual solvent management plan in order to demonstrate compliance with the requirements of the Industrial Emissions Directive, by 31 January each year in respect of the previous year.

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,

- (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
 - (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
 - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i), where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- Where the operator is a corporate body other than a registered company:
- (a) any change in the operator's name or address; and
 - (b) any steps taken with a view to the dissolution of the operator.
- In any other case:
- (a) the death of any of the named operators (where the operator consists of more than one named individual);
 - (b) any change in the operator's name(s) or address(es); and
 - (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) the Environment Agency shall be notified at least 14 days before making the change; and
 - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

- (a) a decision by the Secretary of State not to re-certify the agreement;
- (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
- (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made “immediately” or “without delay”, in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR1	S4.1 A (1) (a) (i) Producing organic chemicals such as hydrocarbons.	Production of organic chemicals e.g. caprylene.	From receipt of raw materials to despatch of finished product including all reaction and treatment stages in between. Plant utilities are part of the permitted process including boilers 1 & 2, vacuum systems, heating and cooling systems, over pressure protection systems, thermal oxidiser and waste handling. The effluent blending plant (EBP) is included, but the on-site effluent treatment plant (ETP) operated by a third party is excluded.
AR2	S4.1 A (1) (a) (ii) Producing organic chemicals containing oxygen.	Production of organic chemicals e.g. Topanol.	
AR3	S4.1 A (1) (a) (iii) Producing organic chemicals containing sulphur.	Production of organic chemicals e.g. Sasmac, Cyguard and DCDPS.	
AR4	S4.1 A (1) (a) (iv) Producing organic chemicals containing nitrogen.	Production of organic chemicals e.g. pyridine and derivatives.	
AR5	S4.1 A (1) (a) (v) Producing organic chemicals containing phosphorous.	Production of organic chemicals e.g. HEMA PC (2-Methacryloyloxyethyl-2'-(trimethylammoniummethyl) phosphate, inner salt).	
AR6	S4.1 A (1) (a) (vi) Producing organic chemicals containing halogens.	Production of organic chemicals e.g. CSAP (4-chloro-3-sulphonamidopyridine).	
Directly Associated Activity			
AR7	Storage and handling of raw materials.	Storage and handling of raw materials in bulk storage tanks, drums, IBCs, bags and other containers.	From receipt of raw materials to transfer to use within process areas.
AR8	Storage and handling of waste materials.	Storage and handling of solid and liquid wastes from individual manufacturing processes.	From generation of wastes to storage and transfer or disposal off-site.
AR9	Effluent blending.	Blending of effluents in the EBP from various manufacturing processes on site against agreed recipes to produce blended effluent for disposal from site.	From generation of effluents to transfer to EBP.
AR10	Effluent transfer.	Handling and discharge of effluents from EBP and	From generation of effluents to discharge from site to

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
		other effluent sources prior to discharge from site.	

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/BU0311IX/A001	The response to questions 2.1, 2.2 and 2.3 given in section 2.1, 2.2 and 2.3 of the application.	24/03/03
Supplementary Information. Multi-Product Protocol – documents describe the techniques used to manage and control change as demanded by production requirements.	SOP 18 (PIMRRA) pages 1 – 21 and System Working Instruction 18/SWI001, pages 1 – 11.	24/11/03
Application EPR/BU0311IX/V005	Document, Environmental Impact Assessments/MPP – Summary (SOP6/SWI008 Attachment 1), provided in response to section 3a, technical standards, Part C3 of the application form.	18/10/18
Additional information	European Standard Operating Procedure – Management of Change (Version 1.0, 01/06/18)	24/10/18
Additional Information	Operating techniques described in the responses to the Not Duly Made Notice dated 23/10/18 (including accompanying information): - Response to Q5 (Operations & Point Source Emissions); - Response to Q6 (Containment, Inspection, Maintenance & Training); - Response to Q7 (Noise).	12/11/18
Response to Schedule 5 Notice dated 04/01/19	Operating techniques described in the responses to the Notice (including accompanying information): - Response to Q1 (Decommissioning of effluent treatment plant); - Response to Q5 (Production of caprylene in Plant 4); - Response to Q10 (Discharge of capryl alcohol from iso-tankers); - Responses to Q11-15 (Management of containment in Plant 4).	31/01/19
Response to Schedule 5 Notice dated 18/02/19	Operating techniques described in the response to the Notice (including accompanying information): - Response to Q1 on storage and containment of capryl alcohol.	19/02/19
Additional information	Standard Operating Procedure – Environmental Impact Assessment/Multi Product Protocol; SOP6 SWI008 (13/02/19). Permit Decision Flowchart; SOP6 SWI008 (Attachment 3).	07/03/19

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The operator shall review the provision of MCERTS accreditation for the monitoring equipment, personnel and organisations employed for the emissions monitoring programme in condition 2.10.1 and propose a timetable for achieving this standard for any elements that are not MCERTS certified.	Complete
IC2	The operator shall undertake a survey of drains, roadways and areas of hardstanding, with regard to containment/integrity and remediate those where defects have been identified. The Environment Agency should be notified on completion of this work.	Complete
IC3	The operator shall submit a BAT assessment for the two on-site boilers. A report shall be submitted to the Environment Agency that includes a timetable to implement any upgrades that are identified.	Complete
IC4	The Operator shall undertake a review of alternative reactor systems in place of stirred tank reactors for all batch reactions with regard to BAT. The review should include a consideration of efficiency, waste generation and costs involved. A report shall be submitted to the Environment Agency that includes a plan to implement any improvements identified.	01/09/19
IC5	The operator shall implement a written procedure to regularly review fugitive releases from the installation demonstrating the application of an appropriate effective and structured LDAR (leak detection and repair) system; as stated in the Guidance for Speciality Organic Chemicals IPPC S4.02 in section 2.2.4 and include a plan to implement any improvements identified. A copy of the written procedure and the outcome of the first review shall be sent to the Environment Agency.	Complete
IC6	The operator shall undertake an assessment of the operation / design of the sulphur trioxide scrubber. A report shall be submitted to the Environment Agency that includes a timetable to implement any upgrades that are identified	Complete
IC7	The operator shall undertake a review of the HAZOP and any change controls for the following processes: SASMAC, DMAP, Topanol and amino pyridine manufacture to ensure that all actions resulting from such HAZOP and change control have been carried out. The order in which the reviews are to be carried out is to be determined by the operator on a risk basis. A written report of the review including as a minimum details of incomplete actions, what remedial action is to be taken, the time scale for the action to be completed shall be sent to the Environment Agency within 14 days of the review of each process for evaluation.	Complete
IC8	The operator shall send a written list of the product manufacture not covered in IC7 which shall be the subject of a HAZOP and change control review to be covered in IC9. The list shall be in order of risk as decided by the operator going from highest risk to lowest risk.	Complete
IC9	The operator shall undertake a review of the HAZOP and any change controls for all other products manufactured at the permitted facility (see IC8) to ensure that all actions resulting from such HAZOP and change have been carried out. A written report of the review including as a minimum details of incomplete actions, what remedial action is to be taken, the time scale for the action to be completed shall be sent to the Environment Agency within 14 days of the review of each process for evaluation.	Complete
IC10	The operator shall carry out a review of the Site Protection and Monitoring Programme (SPMP) to demonstrate that it is suitable and sufficient for identifying any risks to soil/groundwater including those from the production of caprylene. The review shall include: - The physical condition of boreholes;	01/07/19

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<ul style="list-style-type: none"> - The number and location of boreholes; - The testing suite and frequency of sampling. <p>The operator shall submit a report to the Environment Agency for approval that outlines any changes necessary to the SPMP.</p> <p>Any agreed proposals shall be implemented by the operator in line with timescales agreed by the Environment Agency.</p>	
IC11	<p>The operator shall carry out a review of the containment systems in operation within the Plant 4 building. This review shall include, but not be limited to:</p> <ul style="list-style-type: none"> - The total volumes of liquids within the building; - The methods for preventing these liquids exiting the building; - Demonstration that that any plant infrastructure being used to contain liquids is watertight and compatible with any liquids to be contained; - The systems for collecting and disposing of liquids within the building. <p>This review shall take into account CIRIA C736 Guidance, Containment systems for the prevention of pollution. Secondary, tertiary and other measures for industrial and commercial premises.</p> <p>The operator shall submit a report to the Environment Agency for approval that outlines any changes necessary to containment of liquids within Plant 4.</p> <p>Any agreed improvement proposals shall be implemented by the operator in line with timescales agreed by the Environment Agency.</p>	01/09/19
IC12	<p>The operator shall submit a report to the Environment Agency for approval outlining the results of a review of the need for volatile organic compounds (VOC) abatement on the gaseous emissions from Plant 4. The operator shall ensure that this review considers indicative BAT requirements in "How to comply with your environmental permit. Additional guidance for speciality organic chemicals sector" (EPR 4.02).</p> <p>The operator shall submit a report to the Environment Agency for approval that outlines any changes necessary to the gaseous abatement within Plant 4.</p> <p>Any agreed improvement proposals shall be implemented by the operator in line with timescales agreed by the Environment Agency.</p>	01/12/19

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
POM 1	Storage and handling of capryl alcohol.	<p>Prior to receipt of capryl alcohol raw material for use in the production of caprylene, the operator shall submit a report to the Environment Agency for approval.</p> <p>This report must demonstrate that systems and infrastructure for the storage, transfer, handling and use of capryl alcohol are in accordance with Best Available Techniques (BAT) outlined in Environment Agency document "How to comply with your environmental permit. Additional guidance for:</p>

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
		<p>Speciality Organic Chemicals Sector" (EPR 4.02, March 2009) and CIRIA document C736, "Containment systems for the prevention of pollution.</p> <p>Secondary, tertiary and other measures for industrial and commercial premises" (2014) or such other subsequent guidance as may be agreed in writing with the Environment Agency.</p>

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
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Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit) (Notes 1, 4)	Reference period (Note 2)	Monitoring frequency	Monitoring standard or method (Note 3)
A1 [Located at NGR: NZ5377624802]	Plant 1 Scrubber vent S111	VOC total class A (as carbon)	0.1 kg/hour	--	6 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³	--	6 monthly	BS CEN/TS 13649
		Oxides of sulphur (as SO ₂)	50 mg/m ³	--	6 monthly	BS EN 14791
A2 [as plan in section SSC/IPPC/B1.3 M1 of Application 2003]	Plant 1 – LEV F114	VOC total class A (as carbon)	20 mg/m ³	--	6 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³	--	6 monthly	BS CEN/TS 13649
A3 [Located at NGR: NZ5377324786]	Plant 1 – Scrubber vent S211	VOC total class A (as carbon)	20 mg/m ³	--	3 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour	--	3 monthly	BS CEN/TS 13649
A4 [Located at NGR: NZ5375624768]	Plant 1 – Scrubber vent S317	VOC total class A (as carbon)	20 mg/m ³	--	3 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³	--	3 monthly	BS CEN/TS 13649
		Amines (total as dimethylamine)	10 mg/m ³	--	3 monthly	In-house method as agreed in writing by Environment Agency
		Ammonia	10 mg/m ³	--	3 monthly	TGN M22
		Hydrogen chloride	10 mg/m ³	--	3 monthly	BS EN 1911
A5 [Located at NGR: NZ5375624779]	Plant 2 – Scrubber vent S121	VOC total class A (as carbon)	0.1 kg/hour	--	3 monthly	BS CEN/TS 13649

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit) (Notes 1, 4)	Reference period (Note 2)	Monitoring frequency	Monitoring standard or method (Note 3)
		VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³	--	3 monthly	BS CEN/TS 13649
		Oxides of sulphur (as SO ₂)	50 mg/m ³	--	3 monthly	BS EN 14791
A6 [Located at NGR: NZ5375524776]	Plant 2 – Filter vent F122 + vacuum pump exhaust DVP123	VOC total class A (as carbon)	0.1 kg/hour	--	3 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour	--	3 monthly	BS CEN/TS 13649
A7 [Located at NGR: NZ5376124780]	Plant 2 – Filter conveyer extraction unit FCE124	VOC total class A (as carbon)	0.1 kg/hour	--	3 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³	--	3 monthly	BS CEN/TS 13649
A8 [Located at NGR: NZ5375524757]	Plant 2 – SO ₃ Scrubber vent S225	Oxides of sulphur (as SO ₂)	0.01kg/hour 0.06kg/hour (Note 6)	--	3 monthly	BS EN 14791
A9 [Located at NGR: NZ5376024781]	Plant 2 – Crystalliser vent V826	VOC total class A (as carbon)	0.1 kg/hour	--	3 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³	--	3 monthly	BS CEN/TS 13649
A10 [Located at NGR: NZ5375524775]	Plant 2 – Crystalliser vent V827	VOC total class A (as carbon)	0.1 kg/hour	--	3 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³	--	3 monthly	BS CEN/TS 13649
A11 [Located at NGR: NZ5368924770]	Plant 4 – Filter extraction unit E401	VOC total class A (as carbon)	0.1kg/hour 20 mg/m ³	--	3 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³	--	3 monthly	BS CEN/TS 13649

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit) (Notes 1, 4)	Reference period (Note 2)	Monitoring frequency	Monitoring standard or method (Note 3)
A12 [Located at NGR: NZ5368924776]	Plant 4 – Scrubber system vent S344	VOC total class A (as carbon)	0.1 kg/hour 20 mg/m ³	--	3 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³	--	3 monthly	BS CEN/TS 13649
		Amines (total as dimethylamine)	10 mg/m ³	--	3 monthly	In-house method as agreed in writing by Environment Agency
		Ammonia	10 mg/m ³	--	3 monthly	TGN M22
		Hydrogen chloride	10 mg/m ³	--	3 monthly	BS EN 1911
		Hydrogen cyanide	2 mg/m ³	--	3 monthly	TGN M22
		A13 [Located at NGR: NZ5369624765]	Plant 4 – Vacuum pump exhaust VP142	VOC total class A (as carbon)	0.1 kg/hour 20 mg/m ³	--
VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³			--	3 monthly	BS CEN/TS 13649
A14 [Located at NGR: NZ5369424788]	Plant 5 – Scrubber vent S151	VOC total class A (as carbon)	20 mg/m ³	--	6 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour	--	6 monthly	BS CEN/TS 13649
A15 [Located at NGR: NZ5369424788]	Plant 5 – Scrubber vent S152	VOC total class A (as carbon)	0.1 kg/hour 20 mg/m ³	--	6 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour	--	6 monthly	BS CEN/TS 13649
		Hydrogen chloride	10 mg/m ³	--	6 monthly	BS EN 1911
A16 [Located at NGR: NZ5370124796]	Plant 6 – Thermal oxidiser incineration unit and Plant 6 scrubber	VOC total class A (as carbon)	20 mg/m ³	--	3 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour 75 mg/m ³	--	3 monthly	BS CEN/TS 13649

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit) (Notes 1, 4)	Reference period (Note 2)	Monitoring frequency	Monitoring standard or method (Note 3)
		Oxides of sulphur (as SO ₂)	50 mg/m ³	--	3 monthly	BS EN 14791
		Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	200 mg/m ³		3 monthly	BS EN 14792
		Ammonia	10 mg/m ³		3 monthly	TGN M22
A17 [Located at NGR: NZ5368924770]	Plant 8 – Scrubber vent S181	VOC total class A (as carbon)	0.1 kg/hour 20 mg/m ³	--	6 monthly	BS CEN/TS 13649
		VOC total class B (as carbon)	2.0 kg/hour	--	6 monthly	BS CEN/TS 13649
		Amines (total as dimethylamine)	10 mg/m ³	--	6 monthly	In-house method as agreed in writing by Environment Agency
A18 [as plan in section SSC/IPPC/B1.3 M1 of Application 2003]	Boiler stack 1	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	No limit set		12 monthly	BS EN 14792
A19 [as plan in section SSC/IPPC/B1.3 M1 of Application 2003]	Boiler stack 2	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	No limit set		12 monthly	BS EN 14792
A20 – A57 [as in Table 2 of Application 2003]	Bulk storage tank vents	No parameters set	No limit set	--	--	--

Note 1: The concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content;

Note 2: Reference period to be agreed in writing with the Environment Agency;

Note 3: Where an alternative monitoring method is to be used, prior written agreement should be obtained from the Environment Agency;

Note 4: Where a concentration limit value and a mass/hour limit value are specified, the concentration limit value is applicable when emissions exceed the mass/hour limit value;

Note 5: Limit is 0.06kg/hour during tanker filling and 0.01kg/hour at all other times.

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	A1 – A19	Every 6 months	1 January, 1 July

Parameter	Units
Total mass of products	tonnes
Total mass of products that have produced liquid waste streams disposed of via the Effluent Blending Plant	tonnes

Parameter	Frequency of assessment	Units
Water usage	Annually	m ³ /tonne product
Electricity	Annually	MWh/tonne product
Total energy usage (excluding electricity)	Annually	MWh/tonne product
Total raw material used	Annually	tonnes
Chemical Oxygen Demand (COD) of waste liquors transferred from Effluent Blending Plant	Annually	kg COD/tonne product
Total volatile organic compounds (VOC) (as carbon) to air	Annually	Kg VOC/tonne product

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	11/04/19
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	11/04/19
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	11/04/19
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	11/04/19

Schedule 5 – Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“Multi-Product Protocol” (MPP) - means a procedure written by an operator and approved by the Environment Agency, which is referenced in the operational techniques table of this permit. It describes the operator’s management process which can be used to request changes, within the limits in that document only, to the original permit without the need for a formal permit variation application.

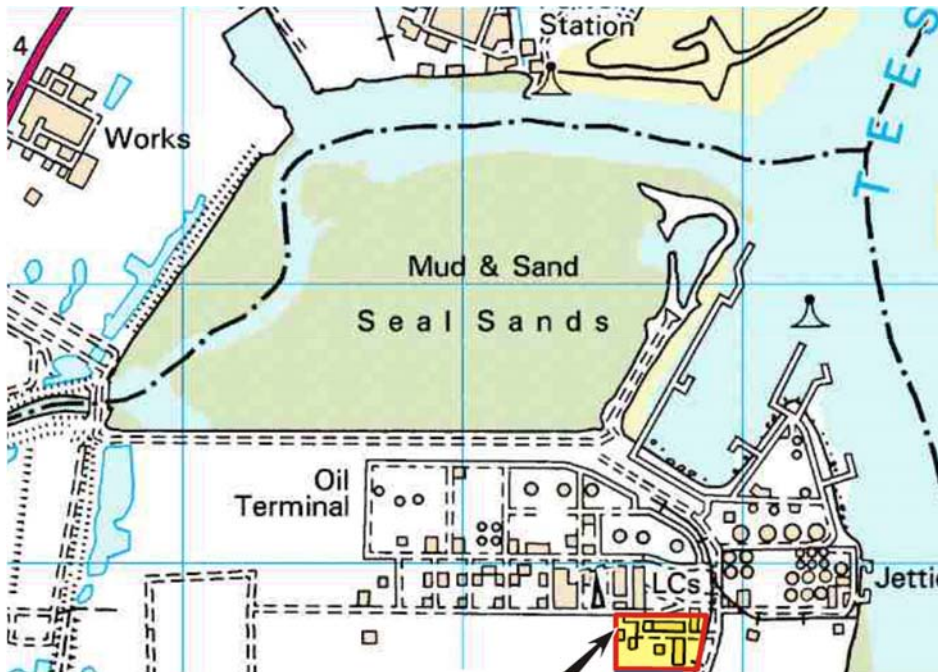
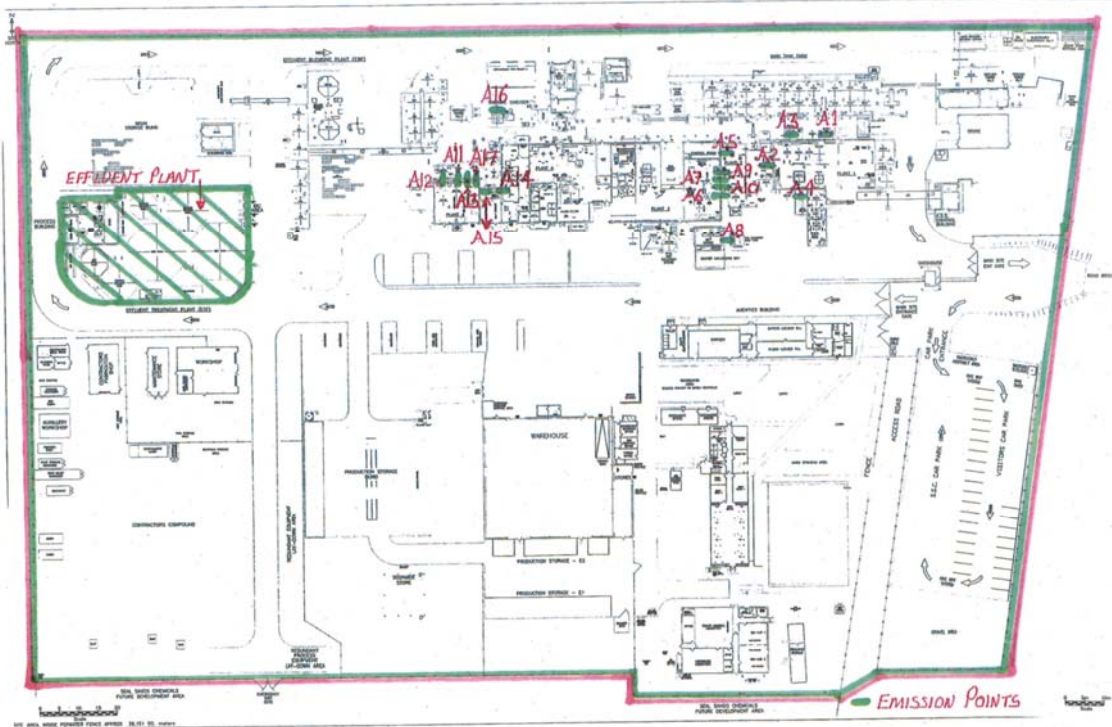
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

“year” means calendar year ending 31 December.

Schedule 7 – Site plan



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END OF PERMIT